In The United States Patent and Trademark Office
On Appeal from the Examiner to The Board
of Patent Appeals and Interferences

In re Application of:	Larry Henry Steinhorst et al.
Serial No.:	10/609,332
Filing Date:	June 26, 2003
Group Art Unit:	2613
Confirmation No.:	7931
Title:	METHOD AND SYSTEM FOR UPGRADING A FIBER OPTICS NETWORK

Mail Stop Appeal Brief - Patents
Commissioner for Patents
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Dear Sir:

Supplemental Appeal Brief in Response to
Notification of Non-Compliant Appeal Brief

Appellants have appealed to the Board of Patent Appeals and Interferences ("Board") from the Final Office Action dated January 2, 2008 and the Advisory Action dated March 21, 2008, finally rejecting all pending claims in this Application. Appellants respectfully submit this Supplemental Appeal Brief, including a replacement "Grounds of Rejection to be Reviewed on Appeal" section in response to the Notification of Non-Compliant Appeal Brief transmitted September 23, 2009. Favorable action is respectfully requested.

Real Party In Interest

This Application is currently owned by Fujitsu Network Communications, Inc. as indicated by:

an assignment recorded on July 9, 2003 from inventor Larry Henry Steinhorst, to Fujitsu Network Communications, Inc., in the Assignment Records of the PTO at Reel 014570, Frame 0469 (6 pages).

Related Appeals and Interferences

To the knowledge of Appellant's counsel, there are no known interferences or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision regarding this Appeal.

Status of Claims

The Office Action rejects all Claims 1-33 under 35 U.S.C. §103. For example, the Office Action states that Claims 1, 2, 4-10, 12-15, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckman et al. (US 2004/0179518 A1) in view of Gaskill (US 5,629,940 A). The Office Action states that Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bruckman et al.* (US 2004/0179518 A1) in view of *Gaskill* (US 5,629,940 A) and further in view of *Krishnamoorthy et al.* (US 6,625,165 A). The Office Action states that Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bruckman et al.* (US 2004/0179518 A1) in view of *Fatehi et al.* (US 6,694,100 B1). The Office Action states that Claims 31 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bruckman et al.* in view of *Gaskill* and *Fatehi et al.* The Office Action states that Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bruckman et al.* in view of *Gaskill* and *Fatehi et al.* in further view of *Krishnamoorthy et al.* The Office Action states that Claims 23, 24, 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bruckman et al.* in view of *Gaskill*, *Fatehi et al.* and *Taniguchi* (US 6,130,764 A). The Office Action states that Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Bruckman et al.* in view of *Gaskill*, *Fatehi et al.*, *Taniguchi* in further view of *Krishnamoorthy et al.*

For the reasons discussed below, Appellant respectfully submits that these rejections are improper and should be reversed by the Board. Accordingly, Appellant presents Claims 1-33 for Appeal. All pending claims are shown in Appendix A, attached hereto, along with an indication of the status of those claims.

Status of Amendments

All amendments submitted by Appellant have been entered by the Examiner.

Summary of Claimed Subject Matter

Claim 1 is directed to a method for providing communications service during an upgrade of an optical communications ring formed from a plurality of existing nodes each node operable to transmit and receive a first frame having a number of first time slots equal to N, wherein N is an integer and the first time slots are occupied by data. (See Spec paragraph 17, 18, 19, 20, and 21; Fig. 2, elements 14, 18, 20, 54, 58, 60, and 64; Fig. 4 element 150, 152; Fig. 5, element 208). The method includes upgrading a first node in the optical communications ring by increasing a data transmission rate of the first node to an increased rate, the first node coupled to a second node, the second node operable to transmit data at the data transmission rate. (See Spec paragraph 18, 19, 20, 21, 24, and 25; Fig. 2, elements 14, 18, 20, 54, and 58; Fig. 5, element 208). The method includes, at the increased rate, transmitting data in a second frame from the first node to the second node, the second frame having a number of second time slots equal to M, wherein M is an integer greater than N and the data occupies a number of the second time slots of the second frame equal to N (See Spec paragraph 19, 20; Fig. 2, elements 14, 18, 20, 54, 58, 60, and 64; Fig. 3, elements 20, 58, 104, 108, 110, 134, 138, 140; Fig. 5, element 210). The method includes providing at least one identifier to the second node, the at least one identifier identifying the occupied second time slots of the second frame (See Spec. paragraph 20; Fig. 2, elements 14, 58, 54, 60; Fig. 5, elements 214). The method includes receiving the second frame at the second node; and detecting, at the second node, the data in the identified second time slots of the second frame according to the at least one identifier (See Spec. paragraph 20, Fig. 2 elements 14, 58, 60; Fig. 5 element 220, 228).

Claim 8 is directed to a method for providing communications service in a communications ring formed from a plurality of existing nodes each operable to transmit, at an existing rate, a first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer (See Spec paragraph 17, 18, 19, 20, and 21; Fig. 2, elements 14, 18, 20, 54, 58, 60, and 64; Fig. 4 element 150, 152; Fig. 5, element 208). The method includes increasing the existing rate of a node to a higher rate, the node operable to transmit a second frame at the higher rate, the second frame having a higher number of time slots than the first frame (See Spec paragraph 18, 19, 20, 21, 22, 24, and 25; Fig. 2, elements 14, 18, 20, 54, and 58; Fig. 5, element 208). The method includes occupying a number of the time slots

of the second frame equal to N using data to be received by at least one of the existing nodes (See Spec paragraph 19, 20; Fig. 2, elements 14, 18, 20, 54, 58, 60, and 64; Fig. 3, elements 20, 58, 104, 108, 110, 134, 138, 140; Fig. 5, element 210). The method includes providing at least one identifier to the at least one of the existing nodes, the identifier identifying the occupied time slots of the second frame (See Spec. paragraph 20; Fig. 2, elements 14, 58, 54, 60; Fig. 5, elements 214). The method includes transmitting the second frame of data to the at least one of the existing nodes. (See Spec paragraph 19, 20, and 21; Fig. 2, elements 14, 54, 58, 60, and 64; Fig. 4 element 150; Fig. 5, element 218).

Claim 16 is directed at a node for forming an optical communications ring that includes a plurality of existing nodes each operable to transmit, at an existing rate, a first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer (See Spec paragraph 14, 15; Fig. 1, elements 14, 18, 20; Fig. 4 element 150). The node includes a bit transmission unit operable to transmit a second frame to an existing node of the optical communications ring at a rate that is higher than the existing rate, the second frame having a higher number of time slots than the first frame (See Spec. paragraph 19, 23, 24, 25, 26; Fig. 2, elements 14, 54, 18, 58, 60, 20; Fig. 3, elements 20, 58, 104, 134, 64; Fig. 4, elements 54, 58, 20; Fig. 5, element 218). The node includes a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N and to send the pattern of data to the bit transmission unit (See Spec. paragraphs 19, 23, 24, 25, 26, 27; Fig. 3, elements 20, 58, 104, 134, 64; Fig. 4, elements 54, 154, 150).

Claim 23 is directed at a system for forming an optical communications ring (See Spec paragraph 14, 15; Fig. 1, elements 14, 18, 20; Fig. 2, elements 14, 54, 18, 58, 60, 20). The system includes a first node operable to transmit and receive a first frame at an existing rate, the first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer (See Spec paragraph 14, 15; Fig. 1, elements 14, 18, 20; Fig. 4 element 150). The system includes a second node coupled to the first node through optical fiber to form a bi-directional line switched ring (See Spec paragraphs 19, 23, 24, 25, 26; Fig. 2 elements 54, 14, 18, 50). The second node includes a bit transmission unit operable to transmit a second frame to the first node at a rate that is higher than the existing rate, the second frame having a higher number of time slots than the first frame (See Spec. paragraph

19, 23, 24, 25, 26; Fig. 2, elements 14, 54, 18, 58, 60, 20; Fig. 3, elements 20, 58, 104, 134, 64; Fig. 4, elements 54, 58, 20; Fig. 5, element 218). The system includes a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N and to send the pattern of data to the bit transmission unit (See Spec. paragraphs 19, 23, 24, 25, 26, 27; Fig. 3, elements 20, 58, 104, 134, 64; Fig. 4, elements 54, 154, 150). The first node includes at least one identifier identifying the occupied time slots of the second frame. (See Spec. paragraph 20; Fig. 2, elements 14, 58, 54, 60; Fig. 5, elements 214).

Claim 31 is directed at a node for forming an optical communications ring that includes a plurality of existing nodes each operable to transmit, at an existing rate, a first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer (See Spec paragraph 14, 15; Fig. 1, elements 14, 18, 20; Fig. 4 element 150). The node includes a bit transmission unit operable to transmit a second frame to an existing node of the optical communications ring at a rate that is higher than the existing rate, the second frame having a higher number of time slots than the first frame (See Spec. paragraph 19, 23, 24, 25, 26; Fig. 2, elements 14, 54, 18, 58, 60, 20; Fig. 3, elements 20, 58, 104, 134, 64; Fig. 4, elements 54, 58, 20; Fig. 5, element 218). The node includes a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N and to send the pattern of data to the bit transmission unit, wherein the existing node comprises at least one identifier identifying the occupied time slots of the second frame. (See Spec. paragraphs 19, 20, 23, 24, 25, 26, 27; Fig. 2, elements 14, 58, 54, 60; Fig. 3, elements 20, 58, 104, 134, 64; Fig. 4, elements 54, 154, 150; Fig. 5, elements 214).

Grounds of Rejection to be Reviewed on Appeal

Section 103 Rejections

1. Whether Claims 1, 2, 4-10, 12-15, 32, and 33 are unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* (US 2004/0179518 A1) in view of *Gaskill* (US 5,629,940 A.

2. Whether Claims 3 and 11 are unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* (US 2004/0179518 A1) in view of *Gaskill* (US 5,629,940 A) and further in view of *Krishnamoorthy et al.* (US 6,625,165 A).

3. Whether Claim 16 is unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* (US 2004/0179518 A1) in view of *Fatehi et al.* (US 6,694,100 B1).

4. Whether Claims 31 and 17-22 are unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* in view of *Gaskill* and *Fatehi et al.*

5. Whether Claim 17 is unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* in view of *Gaskill* and *Fatehi et al.* in further view of *Krishnamoorthy et al.*

6. Whether Claims 23, 24, 26-30 are unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* in view of *Gaskill*, *Fatehi et al.* and *Taniguchi* (US 6,130,764 A).

7. Whether Claim 25 is unpatentable under 35 U.S.C. 103(a) over *Bruckman et al.* in view of *Gaskill*, *Fatehi et al.*, *Taniguchi* in further view of *Krishnamoorthy et al.*

Arguments

This Application has been carefully reviewed in light of the Final Office Action dated January 2, 2008 (the "*Office Action*"). Claims 1-33 are pending and rejected in the Application. Appellant believes all claims to be allowable over the cited references. Therefore, Appellant respectfully requests reconsideration and full allowance of all pending claims.

Claim 1 is allowable at least because the references do not teach or suggest "upgrading a first node in the optical communications ring by increasing a data transmission rate of the first node to an increased rate, the first node coupled to a second node" and "the second node operable to transmit data at the data transmission rate." The Final Office Action cites Paragraph 75 of *Bruckman* in rejecting this claim, but this is incorrect. *Bruckman* fails to teach or suggest a node that transmits data at a data transmission rate and an upgraded node that transmits data at an increased rate, as required by Claim 1. Instead, *Bruckman* teaches a simultaneous rate increase throughout the network. For example, *Bruckman* teaches transmitting at an OC-48 rate until all nodes are upgraded, and then simultaneously increasing the network rate to OC-192 for **all nodes**. *See Bruckman*, Paragraphs 10 and 75. In other words, *Bruckman* teaches that all nodes transmit at the **same rate**, regardless of their upgrade status, but does not teach transmitting at an increased rate at one node while another node transmits at the original rate. *See Bruckman*, Paragraphs 11-15.

Applicants presented a similar argument to the one described above in Responses filed February 4, 2008 and October 15, 2007. In response, the Final Office Action of January 2, 2008 and Advisory Action of March 21, 2008, contend that *Bruckman* does not teach a simultaneous rate increase throughout the network, but this is incorrect. *See* Final Office Action, Page 18; Advisory Action, Page 2. *Bruckman* describes the simultaneous rate increase in at least three instances. *See* Paragraph [0008] ("a manager node in the network supervises a synchronized rate change, which is carried out at all the nodes substantially simultaneously"); Paragraph [0032] ("execute the rate change substantially simultaneously"); Paragraph [0071] ("The rate change is thus carried out by all the nodes substantially simultaneously"). Thus, *Bruckman* fails to teach or suggest "**upgrading a first node** in the optical communications ring **by increasing a data transmission rate of the first node to an**

increased rate, the first node coupled to a second node" and "the second node operable to transmit data at the data transmission rate," as required by Claim 1 (emphasis added).

Claim 1 is also allowable at least because the references do not teach or suggest "transmitting data in a second frame . . . the second frame having a number of second time slots equal to M, wherein M is an integer greater than N and the data occupies a number of the second time slots of the second frame equal to N." On Page 18, the Final Office Action argues that *Bruckman* teaches this limitation, but this is incorrect. At no point does *Bruckman* teach or suggest occupying time slots of a **frame**. Even assuming for the sake of argument that an STS-48 frame of *Bruckman* has N time slots, and an STS-192 frame has M time slots after the entire network is upgraded to OC-192, *Bruckman* would still fail to teach or suggest occupying N time slots of the upgraded STS-192 frame with data. Indeed, doing so in *Bruckman* would undermine the network upgrade of *Bruckman* to an OC-192 rate. For at least these reasons, Claim 1 is allowable, as are all claims depending therefrom. Applicants presented a similar argument to the one described above in a Response filed February 4, 2008 and the PTO did not respond to these arguments.

Claims 8, 16, 23, and 31 are allowable for analogous reasons. For example, Claim 8 recites "the node operable to transmit a second frame at the higher rate, the second frame having a higher number of time slots than the first frame" and "occupying a number of the time slots of the second frame equal to N using data to be received by at least one of the existing nodes." As another example, Claim 16 recites "a bit transmission unit operable to transmit a second frame to an existing node of the optical communications ring at a rate that is higher than the existing rate" and "a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N." As another example, Claim 23 recites "a bit transmission unit operable to transmit a second frame to the first node at a rate that is higher than the existing rate" and "a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N." As yet another example, Claim 31 recites "a bit transmission unit operable to transmit a second frame to an existing node of the optical communications ring at a rate that is higher than the existing rate" and "a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame

equal to N." As discussed above, *Bruckman* does not teach or suggest these limitations. For at least these reasons, Claims 8, 16, 23, and 31 are allowable.

For at least the reasons above, Applicants respectfully contend that Claims 1, 8, 16, 23, and 31 are allowable, as are all claims depending therefrom. Reconsideration and favorable action are requested.

CONCLUSION

Although no other fees are believed to be due at this time, the Commissioner is hereby authorized to charge any additional fees and/or credit any overpayments to **Deposit Account No. 02-0384 of Baker Botts LLP.**

Respectfully submitted,

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APPENDIX A

Pending Claims

1. A method for providing communications service during an upgrade of an optical communications ring formed from a plurality of nodes, each node operable to transmit and receive a first frame having a number of first time slots equal to N, wherein N is an integer and the first time slots are occupied by data, the method comprising:

upgrading a first node in the optical communications ring by increasing a data transmission rate of the first node to an increased rate, the first node coupled to a second node, the second node operable to transmit data at the data transmission rate;

at the increased rate, transmitting data in a second frame from the first node to the second node, the second frame having a number of second time slots equal to M, wherein M is an integer greater than N and the data occupies a number of the second time slots of the second frame equal to N;

providing at least one identifier to the second node, the at least one identifier identifying the occupied second time slots of the second frame;

receiving the second frame at the second node; and

detecting, at the second node, the data in the identified second time slots of the second frame according to the at least one identifier.

2. The method of Claim 1, and further comprising;

after the transmission of the second frame, upgrading all of the nodes by increasing the data transmission rate of each node to the rate that is higher than the data transmission rate;

occupying, using data, all of a number of third time slots of a third frame, wherein the number of third time slots equals M;

directing the second node to ignore the at least one identifier; and

transmitting the third frame.

3. The method of Claim 1, wherein data comprises payload data and redundancy data, and wherein the payload data occupies a first group of the second time slots designated for payload data and the redundancy data occupies a second group of the second time slots designated for redundancy data.

4. The method of Claim 1, wherein M equals one hundred ninety two and N equals forty eight.

5. The method of Claim 4, wherein the data transmission rate is approximately 2.5 gigabits per second and the increased rate is approximately 10 gigabits per second.

6. The method of Claim 1, and further comprising:

generating a third frame at the second node, the third frame having a number of occupied time slots equal to N occupied by the detected data and no unoccupied time slots; and

transmitting the third frame to one of the nodes.

7. The method of Claim 1, and further comprising:

setting a first data receipt rate of the upgraded first node to equal the data transmission rate of a non-upgraded node;

setting a second data receipt rate of the second node to equal the increased rate of the first node;

receiving, at the upgraded first node, the first frame at the first data receipt rate; and

wherein receiving the second frame at the second node comprises receiving the second frame at the second data receipt rate.

8. A method for providing communications service in a communications ring formed from a plurality of existing nodes each operable to transmit, at an existing rate, a first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer, the method comprising:

increasing the existing rate of a node to a higher rate, the node operable to transmit a second frame at the higher rate, the second frame having a higher number of time slots than the first frame;

occupying a number of the time slots of the second frame equal to N using data to be received by at least one of the existing nodes;

providing at least one identifier to the at least one of the existing nodes, the identifier identifying the occupied time slots of the second frame; and

transmitting the second frame of data to the at least one of the existing nodes.

9. The method of Claim 8, and further comprising:

receiving the second frame at the existing node; and

detecting, at the existing node, the data in the identified time slots of the second frame according to the at least one identifier.

10. The method of Claim 8, wherein the second frame has a number of the time slots equal to M, wherein M is an integer, and further comprising;

after the transmission of the second frame, upgrading all of the existing nodes by increasing the existing rate to the higher rate;

directing the at least one existing node to ignore the at least one identifier; and

transmitting another frame having a number of the time slots equal to M from an upgraded one of the existing nodes.

11. The method of Claim 8, wherein data comprises payload data and redundancy data, and wherein the payload data occupies a first group of the time slots designated for payload data and the redundancy data occupies a second group of the time slots designated for redundancy data.

12. The method of Claim 8, wherein the higher number of the time slots is equal to exactly one hundred ninety two time slots and N equals forty eight.

13. The method of Claim 12, wherein the existing rate is approximately 2.5 gigabits per second and the higher rate is approximately 10 gigabits per second.

14. The method of Claim 8, and further comprising:

receiving the second frame at the existing node; and

detecting, at the existing node, the data in the identified time slots of the frame according to the at least one identifier;

generating another frame at the existing node, the another frame having fewer time slots than the second frame and a number of occupied time slots equal to N occupied by the detected data; and

transmitting the another frame to another one of the existing nodes at the existing rate.

15. The method of Claim 8, wherein the data is divided into a plurality of categories, and the higher number of time slots are divided into a plurality of sections each corresponding to a particular one of the categories, and wherein each category of data occupies only a corresponding section of the time slots.

16. A node for forming an optical communications ring that includes a plurality of existing nodes each operable to transmit, at an existing rate, a first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer, the node comprising:

a bit transmission unit operable to transmit a second frame to an existing node of the optical communications ring at a rate that is higher than the existing rate, the second frame having a higher number of time slots than the first frame; and

a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N and to send the pattern of data to the bit transmission unit.

17. The node of Claim 31, wherein data comprises payload data and redundancy data, and the time slots are categorized into a payload data group and a redundancy data group, and wherein the switch unit is further operable to fill the payload data group with only the payload data and to fill the redundancy data group with only the redundancy data.

18. The node of Claim 31, wherein the higher number of the time slots is equal to exactly one hundred ninety two time slots and N equals forty eight.

19. The node of Claim 18, wherein the existing rate is approximately 2.5 gigabits per second and the rate is approximately 10 gigabits per second.

20. The node of Claim 31, wherein the data is divided into a plurality of categories, and the time slots are divided into a plurality of sections each corresponding to a particular one of the categories, and wherein the switch unit is further operable to fill each section with only a corresponding one of the categories of data.

21. The node of Claim 31, and further comprising a signaling unit coupled to the switch unit, the signaling unit operable to coordinate data frame transmission with the existing nodes using a protocol that aligns with the existing rate.

22. The node of Claim 31, wherein the bit transmission unit is a laser gun that is operable to transmit a pattern of light pulses that represents the second frame.

23. A system for forming an optical communications ring, comprising:

a first node operable to transmit and receive a first frame at an existing rate, the first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer;

a second node coupled to the first node through optical fiber to form a bi-directional line switched ring, the second node comprising:

a bit transmission unit operable to transmit a second frame to the first node at a rate that is higher than the existing rate, the second frame having a higher number of time slots than the first frame; and

a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N and to send the pattern of data to the bit transmission unit;

wherein the first node comprises at least one identifier identifying the occupied time slots of the second frame.

24. The system of Claim 23, wherein the first node is operable to receive the second frame and detect the data in the identified time slots of the second frame according to the at least one identifier.

25. The system of Claim 23, wherein data comprises payload data and redundancy data, and the time slots are categorized into a payload data group and a redundancy data group, and wherein the switch unit is further operable to fill the payload data group with only the payload data and to fill the redundancy data group with only the redundancy data.

26. The system of Claim 23, wherein the higher number of the time slots is equal to exactly one hundred ninety two time slots and N equals forty eight.

27. The system of Claim 26, wherein the existing rate is approximately 2.5 gigabits per second and the rate is approximately 10 gigabits per second.

28. The system of Claim 23, wherein the data is divided into a plurality of categories, and the time slots are divided into a plurality of sections each corresponding to a particular one of the categories, and wherein the switch unit is further operable to fill each section with only a corresponding one of the categories of data.

29. The system of Claim 23, wherein the second node further comprises a signaling unit coupled to the switch unit, the signaling unit operable to coordinate data frame transmission with the existing nodes using a protocol that aligns with the existing rate.

30. The system of Claim 23, wherein the bit transmission unit is a laser gun that is operable to transmit a pattern of light pulses that represents the pattern of data.

31. A node for forming an optical communications ring that includes a plurality of existing nodes each operable to transmit, at an existing rate, a first frame having a number of occupied time slots equal to N occupied by data, wherein N is an integer, the node comprising:

a bit transmission unit operable to transmit a second frame to an existing node of the optical communications ring at a rate that is higher than the existing rate, the second frame having a higher number of time slots than the first frame; and

a switch unit coupled to the bit transmission unit, the switch unit operable to generate a pattern of data that fills a number of the time slots of the second frame equal to N and to send the pattern of data to the bit transmission unit, wherein the existing node comprises at least one identifier identifying the occupied time slots of the second frame.

32. The method of Claim 1, further comprising transmitting data in the first frame from the second node to the first node at the data transmission rate.

33. The method of Claim 8, further comprising transmitting data in the first frame from a first existing node to a second existing node at the existing rate.

Appendix B: Evidence

NONE

APPENDIX C

None

APPENDIX D

Related Proceedings Appendix

As stated on Page 3 of this Appeal Brief, to the knowledge of Appellant's Counsel, there are no known appeals, interferences, or judicial proceedings that will directly affect or be directly affected by or have a bearing on the Board's decision regarding this Appeal.